**Unit : Chemistry Learning Expectations**

1. Recognize and test for the physical and chemical properties of various substances.
2. Identify common gasses based upon the results of prescribed gas tests.
3. Recognize some of the major advancements in atomic theory (particle theory).
4. Describe the Bohr-Rutherford model of the atom and the characteristics of protons, neutrons and electrons.
5. Draw Bohr-Rutherford diagrams for the first 20 atoms of the periodic table.
6. Distinguish between elements and compounds, atoms and molecules.
7. Demonstrate an understanding of the term “isotope”.
8. Describe the characteristic physical and chemical properties of common elements and compounds.
9. Recognize the similarities between elements of the same family and the trends across periods of the periodic table.
10. Identify and use the symbols for common elements and the formulae for common compounds.

**Unit Homework**

**Define** each term below in your own words and provide an example or diagram when applicable.

matter

particle theory/atomic theory

element symbol

atomic mass unit

isotope

periodic table

chemical family/group

period

alkali metals

alkaline earth metals

halogens

noble gases

clarity

lustre

viscosity

melting point/boiling point

conductivity

ductility

malleability

combustibility

density

solubility

valence electrons

stable octet

ionic bond

ionic compound

molecular compound

covalent bond

chemical formula

Law of Conservation of mass

precipitate

diatomic molecule

**Compare:** For each of the following groups of terms state at least one similarity and one difference between them. Ensure that your answer shows clearly your understanding of the terms.

1. atomic number and mass number
2. atoms and molecules
3. elements and compounds
4. proton, neutron and electron
5. metal, non-metal and metalloid
6. physical property and chemical property
7. qualitative property and quantitative property
8. observation and inference
9. neutral atom and ion
10. reactants and products
11. physical change and chemical change
12. pure substance and mixture

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| **Science Perspectives Text Questions # (Ch.5, 6, 7)** |
| read pgs. 175-178 **pg. 178 # 2 - 6, 8** read pgs. 208-214 **pg. 215 # 1, 4, 8, 9**  read pgs. 179-182 **pg. 182 # 2, 4, 5** read pgs. 220-224 **pg.** **225 # 1, 2, 4, 5, 6, 8 - 10**  read pgs. 183-184 **pg. 186 # 3, 4, 7** read pgs. 234-239 **pg. 240 # 1 - 8**  read pgs. 192-198 **pg. 198 # 2 - 10** read pgs. 241-244 **pg. 244 # 1, 2**  read pgs. 257-261 **pg. 261 # 1 - 4, 6 - 11**  read pgs. 263-266 **pg. 266 # 3, 4b, 4f, 6, 7** |

**Unit Test: \_\_\_\_\_\_\_\_\_\_\_\_**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_